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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Wilhelmus Franciscus Verhaegh

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EXAMINER

YUAN, KATHLEEN S

ART UNIT

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2624

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/553,918	Applicant(s) VERHAEGH ET AL.	
	Examiner KATHLEEN S. YUAN	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structures and computer programs which impart functionality when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Non functional descriptive material" includes but is not limited to music, literary works and a compilation or mere arrangement of data.

When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32USPQ2d1031, 1035 (Fed Cir. 1994) (claim to data structure stored on a computer readable medium that increases computer efficiency held statutory) and *Warmerdam*, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 17660 (claim to a data structure per se held nonstatutory).

In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory See *Lowry*, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

1. Claims 9 and 10 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claims 9 and 10 define a program and storage device, respectively embodying functional descriptive material. However, the claim does not define a computer-readable medium or memory and is thus non-statutory for that reason (i.e. "When functional descriptive material is recorded on some

Art Unit: 2624

computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized” –Guidelines Annex IV). That is the scope of the presently claimed program and storage device can range from paper on which the program is written for claims 9 and 10, to a program simply contemplated and memorized by a person for claim 9. The examiner suggests amending the claim to embody the program on “computer-readable medium” or equivalent in order to make the claim statutory. Any amendment to the claim should commensurate with its corresponding disclosure.

2. Claims 1-5 are rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. Supreme Court precedent¹ and recent Federal Circuit decisions² indicate that a statutory “process” under 35 U.S.C. 101 must (1) be tied to an apparatus or a machine or (2) transform underlying subject matter (such as an article or material) to a different state or thing. While the instant claim(s) recite a series of steps or acts to be performed, the claim(s) neither transform underlying subject matter nor positively tie to another statutory category that accomplishes the claimed method steps, and therefore do not qualify as a statutory process. Furthermore, the tie must be meaningful. A machine tied only to an intended use statement or to insignificant pre or post solution activity is not a meaningful tie. The tie must be in relation to a step or steps that are significant to the invention, or basic inventive concept. For example claim

¹ *Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972); *Cochrane v. Deener*, 94 U.S. 780, 787-88 (1876).

² *In re Bilski*, 88 USPQ2d 1385 (Fed. Cir. 2008).

Art Unit: 2624

1 does not recite any steps. Therefore, the claim's steps are not tied to a particular apparatus or machine because there are no steps. Claim 2 recites steps to the method, however, none of the significant steps of the invention requires a particular machine or apparatus.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 2 and 7 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claims 2 and 12 recite different values and a revenue value for a state, however, in the specification, the applicant does not clearly define what a "state" is for the media frames. The values are defined, but it is unclear to the examiner how "states" are defined for a medium frame.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 2624

6. Claims 1-5 and 8-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Claim 1 recites a method but does not recite any steps to the method. It is unclear if the applicant is trying to claim a method or something else, since method claims require method steps to be taken in order to be a method. The claim currently only provides conditions for the method.

8. Claims 5 and 8 recite the limitation "the number of states" in line 2. There is insufficient antecedent basis for this limitation in the claim.

9. Claims 5 and 8 recite "those states" which is indefinite because they do not clearly define what "those" are. By omitting the "those" this rejection will be withdrawn, clarifying that the states that the current "those states" refer to is simply the states that different in output quality of the previous frame.

Specification

10. The disclosure is objected to because of the following informalities: The disclosure refers to claims that are currently pending, which may be changed throughout prosecution. Therefore, the specification will not be consistent with the claims throughout prosecution. By omitting the "described in claim," this objection will be overcome.

Appropriate correction is required.

Drawings

11. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the features of the steps in claims 2 and 7, the features of claims 3, 4,, 5 and 8 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Information Disclosure Statement

Art Unit: 2624

12. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered. The applicant has referred to patent literature in the specification, but has not provided an IDS and a copy of the cited document. Applicant and the assignee of this application are required under 37 CFR 1.105 to provide the information/ literature that the examiner has determined is reasonably necessary to the examination of this application.

Drawings

13. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

Art Unit: 2624

14. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

15. Claims are rejected under 35 U.S.C. 102(b) as being unpatentable by U.S.

Patent No. 5940538 (Spiegel et al).

16. Regarding claim 6, Spiegel et al discloses a system (900) to set an output quality of a next media frame, comprising: application means (fig. 2G, s210-260) conceived to provide the output quality of a plurality of output qualities (fig. 2G item 260, a plurality because the process is repeated when the result is not good enough) of the next media frame (item 290); and control means conceived to set the output quality of the next media frame (fig. 2G, item 270, yes result sets the border qualities) based upon a self-learning control strategy (fig. 2G, item 255) that uses a processing time, since item 255 uses the time between frames to learn the next quality, and an output quality of a previous media frame (fig. 2G, i255 “learns current”) to determine the output quality of the next media frame (fig. 2G, item 260).

17. Claims 1, 9, 10 and 11 are rejected for the same reasons as claim 6. Thus, the arguments analogous to that presented above for claim 6 are equally applicable to claims 1, 9, 10 and 11. Claim 6 distinguishes from claims 1, 9, 10 and 11 only in that claim 6 is a system claim and claims 1, 9, 10 and 11 are method, program, storage device and tv set claims. Since an apparatus carries out a method, and since The

Art Unit: 2624

preamble to the claim is not given any patentable weight because it doesn't breath life or vitality into the claim, prior art applies.

18. Regarding claim 2, Spiegel et al discloses processing the previous media-frame (fig. 2G, items 220-255); determine a state (of the image) comprising of: a relative progress value of the processed previous media-frame, a border length, indicating the progress of the border in the previous frame; a scaled budget value of the processed previous media-frame, a average color value which is a scaled value in the budget of the color system to indicate the colors of the border; and the output quality of the processed previous media-frame, the overall qualities that are output, or even the quality of color changes, border velocity/ acceleration (col. 12, lines 29-38); determine a revenue, the yes or no result that the user indicates the return/ reward of the processing (page 2G, item 270), based upon the state and a possible output quality of the next media-frame (fig. 2G, item 260, 265).

19. Regarding claim 3, the revenue is based upon a number of deadlines that were missed, the deadlines being the limit of not being acceptable to the user (fig. 2G, item 270), the output quality of the previous media-frame since that is what determines what the user is reviewing (fig. 2G, item 255), and a quality change which is what the user is examining as the output of fig. 2G, item 260.

20. Regarding claim 4, the revenue for a finite number of states is determined, the state of the next frame from fig. 2G, item 290, the finite number of states, or the state of the next frame that the user is reviewing, being determined by a finite set of sealed budget values, the set of values that are determined in step 260 of average color and a

Art Unit: 2624

finite set of relative progress values, the set of values that are determined in the next frame of border length (col. 12, lines 29-38).

21. Claim 7 is rejected for the same reasons as claim 2. Thus, the arguments analogous to that presented above for claim 2 are equally applicable to claim 7. Claim 7 distinguishes from claim 2 only in that they have different dependencies, both of which have been previously rejected. Therefore, prior art applies.

Claim Rejections - 35 USC § 103

22. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

23. Claims 5 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spiegel et al in view of Examiner's Official Notice.

24. Regarding claim 5, Spiegel et al discloses all of the claimed elements as set forth above, and incorporated herein by reference.

Spiegel et al does not disclose expressly that reducing the number of states for which the revenue is determined by reducing those states that only differ in the output quality of the processed previous media frame. The examiner takes official notice that at the time of the invention, it would have been obvious to a person of ordinary skill in the art to not consider a state that doesn't differ from the previous frame, i.e. to not consider a state in which there is no movement, thus reducing the number of states

Art Unit: 2624

considered. The suggestion/ motivation for doing so would be to save time since it is known that objects are moving in the frames. Therefore, it would have been obvious to combine the detection of Spiegel et al with the skipping of processing of unimportant material to obtain the invention as specified in claim 5.

25. Claim 8 is rejected for the same reasons as claim 5. Thus, the arguments analogous to that presented above for claim 5 are equally applicable to claim 8. Claim 8 distinguishes from claim 5 only in that they have different dependencies, both of which have been previously rejected. Therefore, prior art applies.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KATHLEEN S. YUAN whose telephone number is (571)272-2902. The examiner can normally be reached on Monday to Thursdays, 9 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu can be reached on (571)272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2624

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jingge Wu/

Supervisory Patent Examiner, Art Unit 2624

KY

3/5/2009